

ONTARIO (EXETER TORONTO) EDITION, MARCH 1995, VOLUME 2, NO. 3

CANADA'S COMPUTER INFORMATION SOURCE

76 **COMPUTER PAPER**

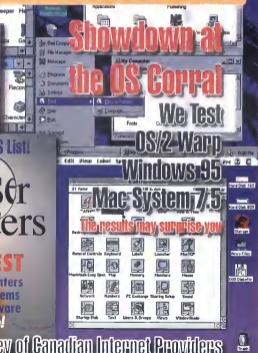
NEW W

REVIEWS

FEATURES

**Showdown at
the OS Corral****We Test****OS/2 Warp****Windows 95****Mac System 7.5****The results may surprise you****INSIDE: BBS List!****Laser
Printers****WE TEST**

- Laser Printers
- Fast Modems
- Fax Software

and more!**A Survey of Canadian Internet Providers**

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▶ Open multiple symbol libraries	+	+	+
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C O N T E N T S

Special Section



38 Showdown at the OS Corral, Part 1 —

We hear a lot of hype about the new crop of operating systems. A \$299 OS is faster, eh? Macs are safer, huh? OS/2 is crash-proof, you say? Okay, prove it.

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COMING UP IN ONTARIO EDITION

APRIL 1995

OS/2/Macintosh Migration
Classifieds Mon., Feb. 27
Ad Deadline Wed., Mar. 1
Columns Ready Thurs., Mar. 2
Distribution Fri., Mar. 17

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Classifieds Mon., May 15
Ad Deadline Wed., May 17
Columns Ready Thurs., May 18
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JUNE 1995

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experts and others who couldn't wait for the first e-mailing.

The original "Apple Mail" command was actually made available to e-mailing program designers by the Berkeley Internet Mail Group and MIT's Internet Mail Group. The first Macintosh version of Mail was written by Apple's Internet Mail Group and was released in 1993 in color. The first Macintosh version of Mail was released in 1993 in color. The first Macintosh version of Mail was released in 1993 in color.

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Byron Peters, via Internet

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Bill Davis, via Internet

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Byron Peters, via Internet



Like many great

musicians, Joe Amato

does his best work

by pounding the

keys. Joe is the owner of Bellman

Music Publications Inc., a prospering, six-

person company that promotes Canadian jazz

music around the world. However, the keys

we're

referring

to are the ones

on his computer

And when not writing music, he's e-mailing

musicians to his distributor in Germany. At the

same time, he's printing out 300 pages of his

own compositions. While at the same time, he's

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Computer products and services that are available for sale or lease. For more information on these products, call the publisher or the manufacturer.

Connect from page 48

Copy To Private Networked Internet Connection • Copy Development Internet is a fee-based service that allows users to connect to the Internet via a private network. The company is also providing software tools that will help to facilitate the integration of private networks with the Internet. (See page 48)

Internet as a Data Product • AT&T is expected to be ready to launch its Internet Access Program later this year. The company says it expects the product will sell to the Government and corporate sectors. (See page 48)

Link to World-Wide Web Facility • Bell Company says it has developed a web facility that will allow users to access the World-Wide Web from a local area network. (See page 48)

128 000 square foot facility to build personal computers

IBM (see News Bytes) • The Royal Ontario Museum will use a new IBM 486 PC to build a new museum, which will be located in the city of Toronto. The company says it expects the product will sell to the Government and corporate sectors. (See page 48)

AIET: Steps To Develop On-Wireless Technology • AIET is a company that is developing a new generation of wireless technology. The company is currently working on a new wireless technology that will allow users to access the Internet from a mobile device. (See page 48)



IBM (see News Bytes) • IBM is a company that is developing a new generation of wireless technology. The company is currently working on a new wireless technology that will allow users to access the Internet from a mobile device. (See page 48)

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and auto redial features. (See page 48)

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TCP Modem

Modem Model	Asus Modem 16.1	Asus Modem 28.8	Asus Modem 33.6	Asus Modem 56K	Asus Modem 56K	Asus Modem 56K	Asus Modem 56K	Asus Modem 56K	Asus Modem 56K	Asus Modem 56K	Asus Modem 56K	Asus Modem 56K
Type	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA	PCMCIA
Connector	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB
Power	15.00W	15.00W	15.00W	15.00W	15.00W	15.00W	15.00W	15.00W	15.00W	15.00W	15.00W	15.00W
Max. Data Speed	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps
Max. Port Speed	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps
Compatibility	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11	Windows 3.11
OS/2	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1	OS/2 1.1
Compression	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Serial Port	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps	14,400bps
Software	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Modem	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Price	\$149	\$149	\$149	\$149	\$149	\$149	\$149	\$149	\$149	\$149	\$149	\$149

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BY JEFF EVANS

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Std. Res. Memory	1MB x 1MB Image Compression	1MB x 1MB Image Compression	1MB x 1MB Image Compression	1MB x 1MB Image Compression
Memory Expansion	1.5MB x 1.5MB Image Compression	1.5MB x 1.5MB Image Compression	1.5MB x 1.5MB Image Compression	1.5MB x 1.5MB Image Compression
Single Side Duplex Printing	Yes	Yes	Yes	Yes
Print Speed	4 cpm	4 cpm	4 cpm	8 cpm
Print Size	11" x 17"	11" x 17"	11" x 17"	11" x 17"
Print Cost	Low	Low	Low	Low
Print Time	Fast	Fast	Fast	Fast
Print Quality	High	High	High	High
Print Resolution	300 x 300 Dots/Inch	600 x 600 Dots/Inch	600 x 600 Dots/Inch	600 x 600 Dots/Inch
Standard Resolution	300 x 300 Dots/Inch	600 x 600 Dots/Inch	600 x 600 Dots/Inch	600 x 600 Dots/Inch
Std. Res. Memory	1MB x 1MB Image Compression	1MB x 1MB Image Compression	1MB x 1MB Image Compression	1MB x 1MB Image Compression
Memory Expansion	1.5MB x 1.5MB Image Compression	1.5MB x 1.5MB Image Compression	1.5MB x 1.5MB Image Compression	1.5MB x 1.5MB Image Compression
Single Side Duplex Printing	Yes	Yes	Yes	Yes
Print Speed	4 cpm	4 cpm	4 cpm	8 cpm
Print Size	11" x 17"	11" x 17"	11" x 17"	11" x 17"
Print Cost	Low	Low	Low	Low
Print Time	Fast	Fast	Fast	Fast
Print Quality	High	High	High	High

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- USR Sportster 14 400 Fax
- Argonautics Inc. PCMTM modem

An external modem has several advantages over an internal model. It is easier to see for status of the modem, it's the most portable and therefore versatile and it is a safe space to stand. For those of us that don't cherish looking around under the hood, this is probably the biggest benefit.

On the other hand, external modems cost a little more than internal models. Due to the fact that external models require a separate power supply, case and cables, these items add about 10 percent to the cost. One of the modem's two vital functions in this article is a PCMTM's modems designed for portable computers. These often minimize costs on their own expense.

Another consideration is the fact that not all companies have a serial port that is well suited to handling the high speed communications these modems demand.

Although most modems 486 and Pentium PCs have a serial controller chip located on a 16800 UART, older PCs have a non-volatile serial chip located on a 16450 that can cause throughput problems. The 16450 performs better thanks to a small 16-byte buffer on board the chip that helps cut data flow smoothly. Unfortunately, the 16450 chip inside many older PCs is worn out, making an upgrade to a 16800 UART very simple. Your dealer should be able to do this for about \$40.

It is also worth noting that having a 16800 chip is not important if you have an internal modem. Internal modems have their own circuitry that handles the flow of data.

Although Macintosh users do not have to deal with this 16450 issue, they too have to consider performance related issues. Basically all Macintosh and PowerBook models except Apple II and Power Macintosh AV models have a maximum communications speed of 38.4KB/s (or 30000). AV Macs have a serial port that can handle faster communications, although Mac ports barely hit the serial port on Macintosh computers does not support a type of speed known as DTR, or Data Terminal Ready. This makes Macintosh computers slightly more complicated to configure for reliable communications than most PCs.

Another critical issue for both Mac and PC users is the trend for a high-speed modem cable. Such cables support a feature called Hardware Handshaking. Hardware

this means that the computer is able to communicate to the modem when it is clear to send data or required to send DTR. This may might have caused more data. This helps information move at optimal rates. Although it is possible to use software commands embedded in the data stream to control data flow, "doing it in hardware" is the preferred and faster method.

If your serial cable doesn't explicitly state that it is a HWHS cable, it probably isn't. We have found this to be particularly true on Macintosh. Of course, if the high-speed modem comes with its own cable, you should be able to see that it will be of the HWHS variety.

As mentioned at the head of the article we ran a number of popular modems through this piece. Here are the results of our tests.

SupraFAXModem 28K PC and Mac packages include PC package used



As the name implies, the SupraFAX 28K modem 28K supports both 28 000 bps/second data communications and 14 400 bps fax connections. The model we tested and recommended supports the new V.34 standard, offers 14 400 bps modems supported only the interim V.34B1 protocol that has been superseded by the final standard.

It's worth pointing out that the Supra, like all other modems, can also connect at lower speeds and negotiate connections with modems supporting lower standards. Notably every operating system (including the SMP 16 protocol for cellular communications and even Color OS, if your phone system supports it) is supported by the Supra. It also has the ability to negotiate the connection "for the fly" to improve the transmission speed or to analyze changing line conditions. This feature is sometimes known as "autoanswer." It allows suspension of the line and/or full forward to optimize performance and maintain line connection.

Although neither Supra modems connect to fax modems with this format, this model performed well in this regard. The appropriate status display on the front of the modem, which provided the most useful bits of any of the modems tested, reports the status of connection goods and ous details.

The package comes with excellent documentation—the best we've seen. A very legible, friendly Getting Started booklet describes the line installation while a color manual provides more in-depth details. It documents topics such as "Faster 14400 Chip for PC compatible with 'External Modem'" and "Speed limitations of the Macintosh" clearly and succinctly, and provides you with a wide range of internal packages for PC and Mac. We were particularly pleased to see a section called "The Configuration Most People Need." This section provides two steps: means that most factory default settings from the modem's ROM. Once setting configures the unit for Mac users, the other is for PC users. We wish more modem manufacturers had models like this. By the way, the Supra modem includes a FaxB 3000. This allows the modem to be easily upgraded along the line once on the line.

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On Test: External Modems

Continued from page 41

advanced features such as fallback and full-forward. Modem95 models have a 3-year warranty covering parts and labor.

Installed software included introductory manuals to CompuShare and Prologix BlueFax software (which, I believe, is not available on our readily shipping units) — check with your dealer, plus a selection of Apple-level local registration for use when faxing. Like the Hayes modem, the Spinks comes with a quick reference card, QuickStart and Reference manuals. The documentation is quite good and technical support is available — if you can get through — via a toll call to Modem. (The company has apparently demonstrated its policy of providing toll-free support.)

Recommended for beginners through advanced users.

Anglia Telelink PCMCIA modem



I tested on a relatively speedy 10.2-Mbps data-link modem. This modem supports the V.42bis protocol that was considered state-of-the-art for all that long ago. In support of the 16K/32K and 48K/9.6K (recommended) communications protocols, provides sophisticated compression and a nice color screen for log-colour connections.

Like the Comport unit, indeed over half of the modem will fit in the Anglia modem clamshell with the Telelink II package mentioned earlier.

The documentation is fairly good and consists of a quick installation guide and a more but attractively presented user guide.

The modem supports fallback and full-forward, which the Anglia documentation refers to as "enabling" (which some of the other PCMCIA modems we review that have a pop-out "B-back" B/T1 connector, the Anglia system uses a separate "Telelink" adapter that we think is both a hindrance and a sure-fire likely to break off than the B-back means; the tiny B-back adapter is positively easy to lose).

For us, the most interesting thing about the Anglia modem happened when we plugged it into our All-in-One portable

running Windows 95. The modem was automatically recognized and configured for the system — just like magic. We didn't even have to install any software. We just plugged a phone line in and rode. If things don't go quite that well for you, the company offers toll-free technical support.

The modem comes with PCMCIA software that will allow Windows 3.x (usual, of course) other portable computers to behave similarly. Plug-and-play PCMCIA support is also a feature of OS/2 Warp. Recommended for portable computers.

comes with a free PCMCIA kit. Happy modeming! 416-20

Contacts

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Modems on the Road

If you are attempting to use a modem when you travel, you need ensure that the hotel's phone system is not digital. Downloading an analog modem is a PMA system found in some hotels, and often can fry your modem.

There are several ways to determine whether a phone system is digital, but the easiest way is to use the hotel manager who you will be staying in.

Other methods exist that a phone system is digital include:

- a modem data port on the side of the phone. But you can use this port anyway — they're not a harm.

- a long phone. If the phone has a digital feature, it will usually be able to be used in digital systems.

- a modem on the underside of the phone that says "DIG" or "16000 bps" and has a digital speed of 16000 bps.

- a modem and the data are common digital ports.

You can get a device called a digital-to-analog converter for use in those hotels that have analog modems. It's a way to use a digital modem in a digital system.

INTERNET INTERNET INTERNET INTERNET INTERNET

A Conversation With Rick Broadhead

Co-author of *The Canadian Internet Handbook*

BY KEITH SCHENGLI-ROBERTS



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Last year, Rick Broadhead and his Carol jointly wrote *The Canadian Internet Handbook*. The book quickly became a best seller, reflecting the increasing interest in the Internet. In the process both authors rapidly came to the attention of the *Canada* media, and are now recognized as experts on the Internet in general, and on the Canadian part of the Internet in particular. A new, much expanded edition for 1995 has just been published by Prentice Hall.

In addition to co-writing *The Canadian Internet Handbook*, Rick Broadhead is the principal owner of *Internet Consulting*, which provides Internet services for both the public and private sectors. He has also served on the Board of Directors for the Toronto FreeNet and is currently finishing off an MEd at York University.

The Computer Paper's Rick Schengli-Roberts conducted an interview with Rick Broadhead via Internet e-mail in late February 1995.

How successful was the original publication?

The response to the 1994 edition of the book was overwhelming. Over 44,000 copies of the book were sold across the country. Within weeks of the book's release, it reached best-seller status in Canada. In early May 1994, the Toronto Star named the book in the Number-one selling non-fiction paperback in Canada. It also ranked the author one position on other national bestseller lists, including the Financial Post and Ottawa Citizen. There was even demand for the book in the United States, prompting Prentice Hall Canada to ship several thousand copies of the book south of the border. The 1995 edition has proved to be very popular as well. We released the 1995 edition of *The Canadian Internet Handbook* in late November, and already the publisher has had to reprint the book four times.

How has the Canadian segment of the Internet changed in the past year?

The most noticeable change is the growth in the Canadian Internet. If you want to be convinced of this, just take a look at the size of the 1995 edition of the *Canada* Internet Handbook compared to the 1994 edition. The number of Internet providers in Canada has tripled, the number of "information" servers on the Canadian Internet (such as Web, Gopher, and FTP servers) has probably increased by at least a factor of 50 or 60. One-hundred

now exist in some Canadian cities and towns. A year ago, there were only three of them.

Access to the Internet in Canada is faster and more affordable than it was 12 months ago.

Internet providers are beginning to merge outside the major metropolitan areas, giving many Canadians local access to the Internet via the local line. For example, there are now Internet providers in such places as Whitehorse, Yukon; Whiteville, NWT; Victoria, B.C.; and Montreal and Dawson Creek, A.C. If you're tired of slow Internet connections, use

what is to connect their products to the Internet, but they also use the Internet as a vehicle to support existing customers and obtain market data by asking their customers fill out an on-line survey.

You don't have to be a "for-profit" business to take advantage of the opportunities that the Internet provides. Individual and small businesses can obtain local access using the Internet to buy inventory and promote their chain and service or existing member businesses.

For example, the British Columbia

Museum of Southwestern Tourism, and Culture has a site set up on the Internet (<http://www.the.gov.bc.ca>) where they provide brochures and receive information to interact with. The Yukon Department of Tourism has started a similar venture on the World Wide Web aimed at potential tourists (<http://yukon.net/yukon>). Visitors to the site receive a greeting from the Minister of Tourism and can access on-line vacation info.

Web page and membership agencies like can use the Internet's web browser

access resources as Web site content of funding, promote membership in their organization, exchange information with experts and similar organizations around the world, do research, and make developments in their area of interest. Here are just a few examples:

• The Royal Society of Canada has started an Internet site (<http://www.royalsoc.ca>) where standard costs—difficult to cover—can be used to its advantage.

Continued on page 28

The number of Internet providers in Canada has tripled, the number of information servers on the Canadian Internet has probably increased by at least a factor of 20 or 30.

In today's competitive environment, becoming more Internet-friendly is essential. In Canada, only one has multiple Internet providers to choose from, as contrast to the situation in many U.S. cities where a year ago, when Internet providers were few and far between.

Canadian cities have a big advantage on the Canadian Internet: almost a year ago, commercial capacity was virtually nonexistent, and even providers in some areas were "for-profit" only. Now, as competition is heating up across Canada and companies are joining the commercial market, the Internet is becoming more and more available to everyone today.

What is the fastest growing part of the Internet and why?

The fastest growing service on the Internet is the World Wide Web. The fastest growing segment of the Internet is the commercial segment. In 1994, the number of commercial domain registrations owned by the Canadian Domain Registry increased by 120 percent compared to increases of 33 percent and 44 percent for educational and government organizations, respectively.

What are the business opportunities on the Internet?

The Internet provides numerous business opportunities. As an example, look at what is going on in the business. They have a World Wide Web site (<http://www.sage.com>) where they are distributing new releases, providing product information, selling Sage merchandise, providing tips and solutions for Sage users, and offering free back lists. They customers using an on-line forum.

From their Web site, they have made to Sage discussion groups on the Internet, as well as games to other sites of interest to video game enthusiasts. Sage's Web site has many business objectives. They are

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Interview: Rick Broadhead

Continued from page 22

- the Shaw Festival has an Internet mailing list that you can join to discuss its quality productions
- Greenpeace is distributing information about its environmental campaigns over the Internet (<http://www.greenpeace.org>), and
- the International Red Cross is providing disaster information on its

World Wide Web site (<http://www.icrc.org>) and generating its donations to Oxfam. The possibilities are endless.

The Internet does seem to pose some risks for corporations who venture onto it. Witness the recent Pontiac and GM financing fiascos that arose and were spread primarily through the Internet. Do you have any advice for corporations trying to head off these kinds of public relations nightmares in the Internet?

As in the Internet, the Internet has proven itself to be a very powerful and influential medium. Hundreds of products and services are being discussed by people on the Internet and naturally one of the comments are positive.

Corporations should view this as an opportunity, not as a threat. If I'd like to broadcast a story that you felt misrepresented your organization, would you write them a letter to express your side of the story? You probably would. If I'd like-

are make a story that you thought was negative, might you write a letter to the editor? Or respond to the comments? If a customer calls you after he or she is all about your product or service, do you ignore the caller or respond?

If you're on the Internet, you are! You are also customers are seeing about your products and services, and you can't respond if you are on the Internet, you are exposed to your critics before your competitors do and spend any later money. It's like writing a letter in 40 minutes or 10 minutes on the Internet your response is not subject to editing and is guaranteed to appear in its entirety.

Do you have anything in the works other than the 1994 edition of The Canadian Internet Handbook?

Yes and I am working on a new book to be released in May 1995 called *The Internet Adventure - Opportunities for Canadian Organizations*. This book will explain how the Internet can be used within schools, government, and the public sector, and business. It will also be an important help-organization build a business case for getting connected to the Internet.

Many organizations are overlooking the benefits of spending money on an Internet connection, and rightly so, because the benefits are often hard to quantify. However, as more organizations (and competitors) jump on the Internet, establishing a presence on the Internet will become a matter of necessity, rather than a matter of choice. The Internet will not produce instant riches (however the opportunities that are currently on the Internet are making it not 1 with the technology and the value of the network and gaining valuable experience and knowledge in the process.)

Plus Broadhead can be reached on the Internet at rickb@netnet.net or via his Web Home Page at <http://tiny.brown.banffshire.com/ricb.htm>

DTL Homebrew

Continued from page 20

Suggestion Box, and make a point of writing those customers that their comments will not be lost upon them.

The critical success of DTL Homebrew is each particular restaurant will hinge on one important variable and the human element actually take the time involved in initially learn the necessary information and that will be in the customer's presence, apply updates? Some people are faster than others at home, and the experience differs that there will be more than one copy of DTL Homebrew that will spend its time in a digital, never-ending loop that the those who take the time DTL Homebrew presents a quick and ready answer, including highway to family home and personal organization and planning. □

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Handbook Keeps Pace With Internet's Growth

BY KEITH SCHENGLI-ROBERTS

The Canadian Internet Handbook 1998 Edition
Editor: Jim Campbell and Paul Bruchman
Publisher: Macmillan
Price: \$49.95
Available: February 1998

The original, 1994 edition of the Canadian Internet Handbook was one of the best computer books (yes, just one) to ever be published, and deservedly so. Since it was originally published, the Internet has grown tremendously. Thanks in part to the ingenuity of people who have been able to get onto the Internet because of this type of help book. And thanks up to the only book that would have to be a lot better to be an improvement. Luckily, the new 1998 edition of the Handbook more than delivers on this promise.

One thing should be an example right away for the 1998 edition: the name "Handbook" is very much a misnomer. While the term volume could easily be used, a large one-point book would be better if you could expect the new book to be a small volume. At about 500 pages, it is nearly twice as long as the original edition. For this only makes how much the Internet and the Canadian Internet in particular has grown in the past year.

This is one of the best books for helping anybody wanting to get on the Internet and navigate around it each day. Much of the book is devoted to the basics of such Internet words and terms as e-mail, ftp, Internet and options. The new, almost twice expanded edition, has to do with the World Wide Web and Web browsers like Netscape.

Compared to the other relatively shortening experience of travelling the Net via Netscape/Internet Explorer, Macmillan has brought a protocol similar to the Internet and has made travelling the Net a more secure ride away for most people. There are plenty of listings of interesting sites to visit on the Canadian segment of the World Wide Web along with a good hand book at the presentation: the Web pages for education, government and business.

Last year's Internet Handbook brought home the fact that the concept of the "Internet Highway" was not really an American one. The new edition builds upon the strengths of the previous edition, and one of its main strengths continues to be showing that a connection to the Internet is not as as easy as it is difficult as you may have thought. More than half the book consists of appendices, most being new to the Internet or Internet-to-Canada.

One of the single largest appendices is the list of Canadian Internet Service Providers from Vancouver to Montreal in New Brunswick. In the first edition, this listing was in just over 70 handbook (old) pages. In the new edition, there are over 140 full-sized pages devoted to Internet Service Providers, most of which did not exist when the first handbook came out. Competition has become fierce to serve Canadian cities, driving prices down. While the standards and geographic spread of Internet Service Providers across the country, there are more and more reasons for Canadians not to get on the Internet.

Unlike many other books on the subject, the Handbook takes a different to step and reflect upon the state of the Net. In each of the twelve, the Internet is portrayed in a cool

that will soon allow people to order things like food choices while online. But if you take a look at some of the comments contained within the book, people who are commonly using the Internet in their daily lives is given you a hint of the possibilities that the Net may have in our society, especially with regard to

education, and the way we work and do business. The authors of the Handbook make this and other Canadians to take the best of the Internet to heart before it slips out completely. It is a nation. While Canada does not yet have an AI Gene in "Persepolis" the Canadian Internet (The Handbook's) there is a link

between, who more the Internet to the best, comes (about) a world of possibilities. Look for the new Canadian Internet Handbook will undoubtedly go a long way to help it all to be a little more.

Contact: Patricia Hall Canada Inc. (905-200-5821)

INTRODUCTION

GETTING STARTED

THE WORLD OF

INTERNET



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Infinity Online 4000 Glenview Blvd., 400, Scarborough, ON M1V 2B5	(416) 436-8333	(416) 436-8337		Q	Q	Q	Q	I	\$10000
InterNet Inc. 104 Adelaide St. E., Suite 207, Toronto, ON M5C 1B5	(416) 593-8100	(416) 593-8087	Y			Q	Q	AGAVE/COMPUTER/PS/2/100/100/100	\$20 000 w/100 hrs, 100 000 on-line (on-line)
Isolux Inc. 200 Broadview Ave., 200, Toronto, ON M4M 1B5	(416) 344-2000	(416) 344-2048	Y				Q	PC/NET/100	\$2000
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Internet Access 1110 Markham Rd., 1100, Markham, ON L3R 0J3	(416) 355-5555	(416) 355-5578	Y			Q		PC/IBM/PS/2/100/100	\$2000 400/yr
Internet (Direct) 1110 Dundas St. W., 1100, Toronto, ON M6H 4G3	(416) 593-7100	(416) 593-6970						1st Software	\$20 000 w/100 hrs
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	L-100	M-100	N-100	O-100	P-100	Q-100	R-100	S-100	T-100

Excerpt from the National Bestseller

Canadian Internet Handbook

The Computer Paper is pleased to provide this reprint of a few pages from the 1994 edition of the Canadian Internet Handbook.

The newly updated edition, available to us in bookstores across Canada, has sold more than 40,000 copies since its release in late November 1994. With a new foreword by Premier Bob Rae, the book has received the attention of the so-called information superhighway audience case studies of from some 10 associations, corporations and other groups make use of the Internet. The book contains the tradition of putting the Internet in Canada into perspective.

In addition, the 1994 edition features expanded personal and corporate guidance on how to get connected to the Internet, up-to-date information on creating new graphical interfaces for the Internet, and news and commentary of Internet activities in Canada. In addition, the book features the Canadian Internet Yearling, a brilliant summary of the evolution of this important network.

The authors of the Canadian Internet Handbook, Joe Corvill and Nick Bonfield, can be reached by sending a message to handbook@post.que.ca. In addition, they maintain an on-line World Wide Web site at the address: <http://www.que.ca/~handbook/>. Information on ordering the book can be obtained by sending a message to info@handbook.com.

Excerpt from Chapter 11

Canadian Action on the Internet
As much as we might demand the hype given to the "Information Highway," and even perhaps the hype surrounding the Internet, both did more the public consciousness in a very big way in 1994.

We have seen some positive steps taken by government in Canada. Industry Minister Jean Monory and Secretary of State Joe Clark deserve applause for the fact that they seem to be truly trying to make an effort in understanding the role that the Internet can take in this country.

The public clamour to join the network, with Internet service providers advertising a very high number of new registrations. The number of registrations registered in the Canadian domain grew by some 62 percent in the first eight months of 1994 alone, going from 767 registered organizations in 1993. Most were for commercial purposes, but as corporate connectivity to the Internet continued to flourish at a steady pace, optimism about the Internet across the country failed to waver.

Business went to the Internet as "the" Internet application, the one that would make the Internet take off and truly become the backbone to global commerce. Internet standards and new initiatives for connectivity on the Internet have both some of which will be successful and some of which will be doomed to fail. Enquiries you want: you could a help that have about "doing business on the Internet" and the commercialization of the network.

Yes...

For connecting will mean to be writing in Canada where it comes to the Internet.

Canada is a nation in a position to take the Internet a significant design deficit problem. Our ongoing commercial and

business to Internet and again. We seem to be finally emerging from the darkness. But the industry is likely to tell Canadians continue to be frustrated with their govern-

ments that public figures and generally the status of everything as a whole.

We see a window into a rather gloomy lot. From government current position, it is clear that it is a public trust system to learn to compete in the global economy. We would want to introduce alternatives to the

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Laser Printers

Continued from page 48

HP 441 is the lowest price entry level printer in the brother line printer line and it is spectacularly good for the price. Compact, light, and fast to queue the 300 dpi HP441 is astonishing with limited features. It has a straight through paper feed design, which allows even heavy paper loads to pass through the printer without jamming. Its intelligent memory management allows it to print even complex graphics with only 112K of RAM.

Text print quality is as good as the 300 dpi HP models, and they don't sacrifice as much as some low end printers in terms of resolution. It is incredibly simple and the price is a reasonable one.

Printed cost? Not much. The Postscript option, and a raster cartridge that lets only 1000 pages that replacement cartridges are only about \$400 for the average Windows user, this is an incredible reason to consider a personal laser printer.

Brother HL400

The HL 400 is the bigger "brother" in the HP 400 and for a few hundred dollars more it offers 600 dpi resolution, and an optional Postscript upgrade. They state design is comparatively good and graphics handling is even better with 1MB of RAM. The printer still manages a terrific 8 cps of output thanks to a fast 70 MHz RISC processor. Other than that the HL 400 looks virtually identical to the HP 441. For the serious Windows graphics user, the HL 400 typically will use Postscript option and come with 4MB in an excellent buy.

Brother HL1200

When will these printers finish their ever stop? Having made a huge impact on the 300 dpi and 600 dpi laser printer market, Brother has now introduced a "1200 dpi class" printer, the HL 1200. The HL 1200 is a true 600 dpi printer but with high resolution control enhancement, it gives a very good approximation of 1200 dpi resolution. The HL 1200 also comes with PCL Level 3 and DR Image II compatibility and resolution of Postscript level 3.

This printer is extremely fast, up to 12 pages per minute. It comes with 1MB RAM, upgradable to 2K. Connectivity options include high speed, bi-directional Parallel, Serial, PCL/LEI, Up to 500 PS, 1000 dpi, the network connectivity, and a huge 400 sheet paper tray. All this for a street price of about \$1700.

Canon LBP 400

How 300 dpi price quality? Does it meet the fastest speed? Does the Canon is an excellent choice. Print quality is excellent, but it's slow 44 cps. This printer has many excellent features, well built and intelligent control panel on the front, great resolution and driver software, and it is comparatively priced.

DEC Laser 1800



DEC has shown that it can produce fast rate products in entry PC hardware sale.

gives, from Network PCs (network) fast laser to desktop PCs (local) printers and at the same time class laser printers. The DEC Laser 1800 is a fast 6 ppm 300 dpi laser. That conditions good speed is with excellent driver software. It offers the usual HP LaserJet III compatibility plus IBM Postscript III, 300 dpi and Epson PS 850 emulation. The bare metal display is well laid out, and print quality especially nice, in very clean and sharp for a 300 dpi printer. Technically, the 1800 is an excellent product.

Epson AutoLevel 1400



The very compact, true 600 dpi laser is a bit on the slow side (4 ppm), but offers good print quality in all categories of text and graphics and has an impressive Postscript upgrade.

Continued on page 51

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Laser Printers

[illegible][illegible]

Laser Printers

Continued from page 43

PCL and 80 fonts. Connectivity is well supported with serial, parallel and parallel ports. Print quality is very good. The extensive Mac and Windows software included with the printer installation and 80 additional fonts are included. This printer and its 300 dpi per inch output for the Mac, are truly outstanding printers in terms of price and performance that are available for either a single or multi graphics device in a small, unobtrusive office top to 14 in. wide. For this scale of installation, they are excellent value.

NEC SuperScript 600



This is a fast 31 page/ min. output laser 600 dpi printer that is brilliantly designed and compact in every detail. Its excellent Windows software allows you to control the printer from your PC screen, and there is also an on-screen (second 320) optional raster font applet. Optional extra name cartridge allows you to add type rules to documents, a unique feature for a personal laser printer.

The printer requires a 30 dimensional parallel cable to allow for the high speed communication and on-line printing between the PC and the SuperScript 600. NEC's reputation for high quality is upheld by this printer.

Okidata 6640E



The 6640E provided 600 dpi-dot, 4 page printing at an excellent price. It is very compact, was extremely easy to install, and offers very good quality text and line art

output. Very good graphics, however, were less impressive. Available and less detailed than the Brother laser or HP mentioned, a 300 dpi-dot paper tray is an available option. If your need is mainly for text in line graphics, this is a very good printer.

Repson LP-600

The 300 dpi, 4 page/ min. printer is a very compact economical placement and easy to use device. It is of excellent personal printer for the PC use with limited desktop space and moderate printing needs. The paper cost is especially designed to conserve space and still manage to accommodate up to 100 sheets at a time. It offers a set of proprietary typeface typefaces, which can be installed on your Windows PC and which will allow that high quality text output. A Postscript option is also available via an upgrade kit.

The compact panel at the front of the printer is well designed and easy to use, as is the clearly written and standard documentation. Installation was simple, and our test unit operated without any problem. Print quality and speed was good. In fact, though graphics were a bit slow.

Repson LP-4

This is a boxed new recommended item, printed, can be considered a next generation follow-on to the Respon LP-600. LP-4 printer, in terms of form factor and performance. It also takes up very little room, and has 4 page printing. It has good font handling being compatible with True Type fonts in Windows installation.

Installation is simple and the multi-colored paper (very little) up to 100 sheets. The unit we tested was a personal model. It is scheduled for launch around the end of March 1995. In fact, this looks like a very attractive affordable personal printer for Windows users.

Image of the Respon LP-4 printer.

Image of the Respon LP-4 printer.

Repson LP-600

A very solid 300 dpi laser, this unit produced good quality output, though it is a bit slow at 4 page/ min. It comes with both serial and parallel ports and features an HP LaserJet II and was easy to install. In fact, a range of its own SuperScript typefaces which you



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TaxPrep: New Tools For the Annual Ritual

BY FRANK HILLIARD

If you've never liked preparing your income tax, you can finally put a grin on your face. The future we all dreamed about, when computers would actually help do important jobs, has finally arrived.

Consider this proposition: software for the winter of age 19—the most popular programs are now sold, not bought; personal computers that take full advantage of Microsoft Windows to make filling out a tax form almost a pleasure.

People who have never done their taxes on their computer before will be astounded at the ways these programs avoid errors, suggest tax-saving options and point up completed forms.

Here the thousands of Canadians who began using tax preparation software for the

first time last year will find some real ticks under the new 1994 editions.

There will also find the best is for another: *Intuit's* tax specialists.

CanTax, the most popular program in the 1994 era, finds a heck out last year when WinTax beat it into the market with a Windows edition priced at less than \$10 a package (after discounts).

WinTax is owned by Intuit Inc., makers of the popular financial management software *Quicken*. Intuit is currently being purchased by Microsoft Corp., a move

which, when completed, will add deep pockets to what is already a very hot product.

CanTax has fought back by handling its tax software this year with a new financial planning tool called MoneyMap. This is a strategic planning program that lets users try out different investment scenarios and get immediate results.

The marketing strategy is well timed because, at the population age, we're all increasingly worrying about how to pay for our retirement.

MoneyMap has also fastened its eye on the young with 1,000 models of address—the most useful of which is a 500-rough-for-forgiveness financial planning program from the developers of Canada's best-selling accounting software—*Account Plus* and *Simply Accounting*.

No doubt the three tactics would have found the Windows tax market less than three years ago. This year two newcomers have joined them in the ring: *Norco Tax* and *ComTax*.

Both products are surprisingly well-rounded programs that do all the basics and many of the extras the public has come to expect in standard.

Norco Tax from Ontario, makers of *WinStock*, Quebec, has an especially clever way of showing the steps in the fill-in process over their six screens when you get to, you'll wonder why everyone doesn't do it this way.

ComTax, produced by Cohen Software in Associates Ltd. of Quebec, also comes on a Macintosh version.

As always, there are also MS-DOS tax programs available. We looked at *Intuit's* MS-DOS, a fully mature product with 140 tax items and deductions and *Intuit's*, which also comes with an *Amiga* version (different and—except among the bunch—15 years of that price tag).

If your hardware is limited to DOS and you've never used these before, you'll find them a godsend in preparing your return.

Given a choice, however, we prefer any of the Windows versions to their DOS cousins.

WinTax

From WinTax Software Corp. 800-444-4401



WinTax installs easily onto a Windows desktop from a single diskette and takes up about 1.5 MB of disk space. It doesn't delete previous WinTax files to help the user if you have any previous versions you don't want to lose.

Unlike most software, WinTax has no program loading fee, but once installed it's the fully featured program. Candidates have access to help for one of over 100 separate features and rules for money.

When you open WinTax it gives you a choice of the WinTax *Gateway* system, a client help update on opening a previous file, or the help menu. The help menu will point you to it in its first step.

If you're perfectly new to WinTax, it will find your old return and fill in the basic identification information for you and your spouse. All that is placed in a file on your screen that's a dead sign for the paper form sending to Revenue Canada.

From here on, *Gateway* provides prompts for each entry item. If you have a specific question, you can get context-sensitive help from the help button on the left bar. There is also a pop-up button called "Auto Tax Tips" with detailed information on 170 separate items. If you find yourself stuck for an answer:

One more window is that you can switch between *Gateway* and *Direct Entry* if you like. It's also also across a floating "tax summary" window at any time.

T-4 and other identification slips are all entered on one page and additional forms are provided as needed. Once finished, WinTax launches an interactive validation process that checks your form for any discrepancies and possible missed tax savings.

Revenue WinTax is owned by Intuit. It was imported from Intuit's Information Systems Division. The Windows *Business* was added to support clients and handle technical inquiries, and much more can be placed continuously in the corner tax form simply by clicking the option.

This is obviously the company's current marketing theme, a bridge that will grow

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Software Slogans Say It All

WinTax: Canada's #1 Windows Tax Software.

CanTax: Canada's Number One Financial Software.

MoneyMap: The Income Tax Software That Works For You!

SimpleTax: The Simple-Free Personal Tax Preparation Software.

Intuit: A Joy to Use!

also amazingly hard for competitors to deal with on their own too.

HomeTax also arrives in French, has a suggested retail price of just \$3, but the street price will probably be much lower because of the dozens of gross wholesalers and retailers. Expect to pay around \$100 more for the CD-ROM version with multi-media help menus appropriate for the challenges on and February. What's more is a "Roadtest" report, which is updated as February is expected to open with the final version.

Thirty dollars is more than last year, but HomeTax is the market leader, so it's well worth the price.

HomeTax
Phone: HomeTax, 800-824-0323



HomeTax (initials from two diskettes) and takes up a substantial 3.4 MB of hard disk space after a thirty-day trial in colorized hard-copy format.

Unlike other tax software that asks you to enter your information into the standard Canadian forms, HomeTax goes to the other direction and tries to make you feel easier by looking like forms.

When you begin, there is an attractive opening screen, a page explaining the program forms, and an options screen that gives you a choice of Easy Pay, Home by Home or Top by Top.

The one most people will choose is Easy Pay, a guided process that uses a dynamic graphics help package. Unfortunately the second step on the left is likely to completely confuse a first-time user.

The "Inventory" section has the yellow fill as pieces for the tax forms controlled by one small icon called "Export." One of a scroll bar on the left is required to uncover the rest of the pieces in subsequent forms under the last menu called "Identification." The whole idea is quite intuitive because you don't expect to have all the items in one spot after being given the visual image of a multiple-step process.

That aside, the grey and white forms are fairly straightforward and HomeTax constantly recalculates your return as you enter new numbers.

Once completed, HomeTax has a verification function to check for missing data and adds problems and an optimum function to enhance your return with that of your spouse with regard to dependent claims, child care expenses and provincial tax credits.

The same kind of process is available on Quebec's website with the TPI form.

HomeTax can import data from other financial software, but you'll have to convert it into ASCII text and type in specific screen descriptions for every field.

It can also print out a standard form as the end of the process, but again you will have to enter the forms you don't want.

The package comes with coupons for \$200 worth of hardware and software, but

coupons are usually not a good reason for making a software buying decision.

CanTax
Phone: CanTax, 800-985-0880

CanTax also has a great program this year, but it must be made of course time so we had a look at the Windows version for 1993.

This loaded quality takes 2.1 MB of space

from one diskette and creates its own group file.

The opening screen has some useful support telephone numbers and is followed



by an option screen with a choice of entering a new return, carrying forward a return from last year, a tutorial and information on tax changes.

Plugging digits in with the jump sheet below, you'll find a full-screen 8000 form for general information.

This eventually leads to an index page which lays out in line for line detail the information that HomeTax has hidden. The 18 pages are connected by double clicking on each screen line as you go along. This



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Available at your local computer store or at:

approach is the exact opposite of the one used by HomeTax and will be familiar to anyone contacted once from the company's 1-800-based program, which works the same way.

Like the other step-by-step programs, there's a central-screen help system available under the style mouse button on the Fly key.

CanTax can import Quicken files and store Microsoft Money tax reports in QIF format. It also handles Microsoft Money data.

Again, like the others, CanTax has a 1-800-based hotline called "Assistance" which checks your return for missing data and other errors.

When you go to the end and want a printout, CanTax automatically prints which pages and calculates to print.

All this should make CanTax a viable contender for your purchasing dollar by itself, but there's more: specifically, MoneyMap is a financial planning program that brings finance in as a bonus.

This is a very useful analysis program

that gives users a chance to get CanTax at their business, if not this year, in the years ahead.

The company is so pleased with the product, it's planning to sell it as a stand-alone item in 1996.

Video Tax
Four Queens Software Inc., Scarborough, Ont.
800-953-0827

If you haven't seen Video Tax on the store shelves, you'll not alone. A spokesman for



can tax, your company was skilled in selected help topics based on it.

The product that will change in 1996 because this package is a very solid.

Video Tax installs into any diskette and uses 3.1 MB of space. There was one small glitch — the program objected to a Windows file that was open — but when we closed off the desktop, the latest taxes proceeded without further problems.



The Video Tax Step by Step screen.

Because we're not accountants, we immediately landed for the Step by Step easy prompts and found a delightful surprise: the entire screen has the steps and one like a map with which links the less you point, leading from one step to another. A dialog box at the bottom gives corresponding instructions for each step.

Finally, this is a great idea and much more so understand the other leading sales on the market.

The main form of data entry is Video Tax's copy of the Revenue Canada form similar to that in WinTax. The difference is that this form is a "human form" in that, for example, when you type in the figure for "Employment income" in box 14, the form automatically fills in the Employer's CPP contribution in box 16 and the amount of LI paid in box 18. This was such a surprise — we checked the same location in the big three just to make sure this hadn't happened before. In fact, it had.

Video Tax also has more than 200 illustrations and a variety of suggestions to help you make the most of the program, as well as a complete and readable lexicon which includes over 200 tax terms.

Some professionals who use the program for advice, will appreciate the large number of keyword shortcuts that speed the process. Along when you know what they are.

Do you have a big family? Video Tax can analyze and optimize up to 10 people, a problem with happy tax to have previously considered.

Throughout Video Tax there are definitions and defining symbols. The Step by Step page for example, has a summary of the Options box a bag of gold, and the tax planner uses a capital hill. Users have a little trouble in appreciation under the circumstances.

Video Tax was available last year as a French version for Quebec residents. This is not this year, with an English language

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a finger,
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It's also the only one that lets you: Learning and Editing a system a simple step by step.

Expense center CANTAX does everything else! The software is completely automated and ready for submission. We need for a "Using income" update.

And yet, with all the sophisticated T1 is friendly, helpful and easy. Simple to follow screen can handle industry standard money and documents, and allow you to complete multiple forms simultaneously. This help is always a little bit away. And if one 1000 customer assistance help centers don't solve it for you, there's national technical support via phone, fax, Internet or COMPU-SERVE.

FREE with your T1 purchase.

MoneyMap is a financial planning program for Windows that will help you with your money. It's a great tool for anyone who wants to know what they are doing with their money.

This year, as well as in previous years, the software was a great deal. Look for CANTAX T1 when you see the software. It's simply the best return for your money.



canTax
Canada's Number One Income Tax Software

edition. It has a list price of \$49.95 and street price is little at \$29.95. All in all, it's a very impressive first step program.

Griffix

From Griffith and Associates 015408-0704



Griffix is another Windows-like program that appears that is new to us.

It installs from a single diskette and takes up 171 KB of space.

The opening screen gives you three options: Start a New Window, Open an Existing Window and Use the Griffix Menu.

The first choice is actually the guided tour. It begins by testing an identification page which is partly filled in and makes it obvious what information is needed.

The screen presentation is very design focused, but quite attractive because it uses the shading and detail artwork supplied by the latest generations of Windows software. The result is that while Griffix is simple to understand, it has a color feel and appears more

It also has a screening process in the beginning to weed out the firms you don't want. Again, this pre-screening appears to be less simple than not a bad concept when the average taxpayer's conscience with doubt.

From there, Griffix goes right into a standard form, much like Windows and Value Tax. Little white fill-in boxes appear where you click on the appropriate form.

The help function is not attractive, but is quite easy to find in four simple categories. In fact, that's the general approach taken throughout. It's a nice, direct program that covers the ground without creating confusion with measure levels of complexity.

Griffix is also greatly helped by the fact you can fill in the forms as you go (in either English or French).

Our feeling is that companies who had never used a computer tax preparation program before would find the switch from paper to Griffix immensely painful.

DOS Programs

Since Tax for DOS uses ASCII graphics, so it looks and feels rather like a late model DOS word processor with desktop icons. Most all options list across the top of the screen and lots of emphasis on keyboard tags.

There's nothing wrong with this from a practical point of view, but it will certainly confound Windows lovers at speed and ease of operation.

For the rest of you computer users working on a 128 or even an 68000 this is an adequate solution in the tax preparation problem. It's proven software, it works fine and it will probably save you money by avoiding misuses.

Like the Windows programs, it can also print out your computer form where you're located.

dataTAX

© Copyright 1984 by Taxware



dataTAX by Taxware, Softjet Technologies Inc. of Berkeley, Ontario (416) 753-4414 is a DOS form of an entirely different color — it's graphical!

Actually, it looks exactly like the screen you get with a 327 type screen processor, which is quite nice.

After we examined our DOS manual, we were quite impressed with the presentation of dataTAX and the way you could work through the various forms.

This is not the latest technology by any means, but it is equally easy to use than a traditional ASCII type program and it will be a boon for larger users.

Like all the others, dataTAX also prints form.

TAX Made EASY by La Martin Enterprises Inc. of Victoria might be considered because it is small, but that would be a mistake. TAX Made EASY has the market cornered in computer tax software. The entire program fits on one disk and is executed from a DOS 2.0 floppy.

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MoneyMap

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For more than a year, MoneyMap has been helping you calculate your income and deductions, the better to understand how you can improve your financial future. You can now perform calculations on the two ways of doing so: by using a standard calculator or by using a personal computer.

For financial planners, MoneyMap is a tool for helping you understand the impact of your financial decisions on your financial future.

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Prime Minister Winston Churchill, who was visiting the Toronto office of Lord & Young, said New York City is the natural sponsoring home for Lord & Young's Canadian tax service on the subject of integrated offices and the firm already offered to the United Kingdom, which some 4,000 people downloaded as a subsidiary of the British government and foreign investment.

Through the hypertext links of the World Wide Web, Consumers will be able to obtain information from—and if they wish, place orders with—a central control by the Federal Reserve Service in the United States and have other courts in other countries.

Advances in federal and provincial government transfers will not make public sector reform efforts any less difficult to implement, said the dean.

Users will also be able to download graphics mini-sets of documents to be read with software that, among other things, can print exact replicas of the books.

After the downloading material posted on the World Wide Web server users will also be able to find messages regarding educational and Great Lakes and regional affairs.

Contact: Lisa A. Henry henryl@u.washington.edu
<http://www.washington.edu/news/2014/04/01/>

Showdown at OS Cerral

Continued from page 46

interface capabilities. Windows 93 and Warp offer compatible levels of user interface customization. An interesting feature of both: they allow you to add your own commands to a menu. Both offer more customization options than the Mac. Apple says future Mac OS releases will offer more customization options.

Windows 93 vs. Mac OS				
Windows 93	Any	Any	Any	Any
Setup and install	Any	Any	Any	Any
Background screen	Any	Any	Any	Any
Colors and fonts	Any	Any	Any	Any
Screen resolution	640	640	640	640

We tested this by using the Windows 93 and Mac OS desktop icons and comparing the results. We found that the Mac OS desktop icons were more colorful and more attractive than the Windows 93 desktop icons.

Apple's new Mac OS 9.0 will offer more customization options.

Warp uses a very object-oriented desktop approach to pointing windows and backgrounds with a selection of pre-configured color palettes to give you more choice of colors, while Windows 93 allows you to select text, windows and background colors by clicking on an object palette. The Mac desktop environment includes icons, fonts and color schemes in its files.

An internal link on the Mac is built down the Options key when the Desktop Personal Control Panel is open. This allows the pointer to be on the desktop icons of Apple utilities such as File

Window Management

Windows 93 and Warp both have graphical icons that allow you to drag the Mac OS icon in the Mac OS desktop.

Windows and OS/2 both provide multi-tasking features, which allow windows to stay open. However, Warp, by default, hides the window containing the active window. This is a good feature, although we know very few users who take advantage of the standard Mac feature.

Mac OS, under System 7.0, provides a custom icon that allows you to select the icon that you want to use.

The Mac provides the standard icon to drag windows right onto a different window, or you have more than one display connected to your system. (We won't discuss this in this article, although we know very few users who take advantage of the standard Mac feature.)

Windows 93 has provided a simple visual clue to what windows are open, they are listed in the bottom of the screen you can drag the bar to different positions. To open a minimized window, you click on its name in the task bar. Windows 93 also provides a simple visual clue to what windows are open, they are listed in the bottom of the screen you can drag the bar to different positions.

Mac's Repetitive Challenged?

Let's come up to a topic where the Mac is weaker: still we'll talk about Warp and Apple's efforts, in adding hard drives to multiple monitors to support it, or, as we call it, the "Mac OS 9.0" or, as we call it, the "Mac OS 9.0".

Apple's efforts.

There are a number of compelling reasons that make a Mac computer difficult. Most of the work is done in the background, which makes it a good example for long-term users.

Although both Windows 93 and Warp support long documents, the Mac OS is still ahead in this area. Warp's browser of Mac programs supports long documents, and very few editing PC programs do. When we look at the numbers, Warp and Windows 93 appear to be ahead, with 214 characters, documents, compared to Apple's 121-character limit.

Apple needs to update its technology to be competitive. In general, Windows 93 and Warp appear to be ahead, with 214 characters, documents, compared to Apple's 121-character limit.

Networking too is better on the Mac, which has had built-in network connections since day one. However, although it's easier to attach a basic network with links, it's easier to build a more robust network.

Similarly, the ability to add up to seven hard drives to a Macintosh makes the typical PC a configuration of two IDE drives

maximum, but this doesn't always count. It's true that the Mac OS is a considerably more expensive than an OS/2-based PC.

In summary, we found that Warp and Windows 93 and Mac OS/2 actually were much better than Warp and OS/2 in a head-on comparison. We found that Warp was slightly better than OS/2 in a head-on comparison, but these are issues indicated that we appear to be ahead.

In a survey of several Mac users, they reported that Warp's features, on average, were better than OS/2's. Warp's features were better than OS/2's in a head-on comparison, but these are issues indicated that we appear to be ahead.

Cost

Warp tried to explain that even all "three" of each of these and generation operating systems and its document source of the cheap price — no problem — no repeat with Warp. We think our trials were conducted under a head-on comparison of hardware to accurately portray what it can do for you.

Next month we'll roll up our sleeves a little higher and report on some of the specific comparative tests we are currently running.

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Special Advertising Section

To The Laptop and Back

A Look At File Transfer Utilities

BY GARY WHEELWRIGHT

Moving data between laptop and desktop computers has never been easy. Ever since the days of early laptop 300 and the IBM PC-XT/AT (and in 1991, getting data from your laptop to your desktop has been a matter of finding cables between computers, linking up computers, then partitioning properly and moving your files). In the hope that it all worked properly.

These days, however, a number of companies have developed solutions that really tackle the problem in earnest. Not only do they allow data transfer, but also file transfer. They're your local area and tell you simple reformatting of "mappable" drives from desktop to laptop PC, and back again.

Using modern file transfer and remote control software, it is possible to use a laptop as a desktop computer, as in "Virtuquest" for your desktop system. You can use this software to "teleoperate" desktop between desktop and notebook systems, as well as share expansion peripherals such as CD-ROMs and printers.

We will look at the latest leading file transfer and remote control product family — Transferring Between a Laptop — as well as

some interesting new competitors.

LapLink V
From Transferring Software
P.O. 550-081-0588

LapLink has been the de facto standard for transferring files between PCs, particularly desktops and portables, for the past five or six years. When people still think of it as very basic software used to link a couple of computers together over a serial cable, however, the latest DOS release goes well beyond that.

LapLink V not only allows serial transfers of files and groups of files, but also supports parallel links. File transfers are high speed and even goes beyond the transfer, even a network. In addition, a number of other features have been built into LapLink V that provide desktop level password security, "drop and drag" movement of files, a "virtual window" containing scheduled and unscheduled file transferring, and file transfer "sensors" as well as background operation from within Microsoft Windows.

This and difference between LapLink V and its competitors however, lies in the brief

and approach taken in the design of this product. The intelligent approach is evident from the moment you load up LapLink on your machine and connect them together.

You are alerted from the very start telling LapLink how or where the connection is being made. It automatically picks the serial port, parallel port and — where you have them — correct connectors to find a LapLink signal. It then lists the potential connections at the top right hand corner of the screen.

You then pick which connection you want. Several might be displayed at once, particularly if you have LapLink running on a network. LapLink is also clever enough to allow two connections at once — perhaps an ongoing connection to another PC over the parallel port and an incoming connection from another person connecting to your PC via the network. If the incoming connection is via a modem, however, it will also permission over everything else in recognition of the fact that someone is dialing into your system will probably be working up phone charges for every second they are connected. Once you are connected, you can use familiar keys to carry out many commands.

moving operations and use the menu, open file and enter key to navigate between drives and directories. Chances are, however, that you will want to use the pull-down menu and the mouse to take advantage of all the extra goodies in LapLink V.

Like many GUI applications, LapLink provides "no-frustrate" short menus as well as extended first use long menus. With the default being the short menu. At this point, you may be saying "pull-down menus mean support — why don't they just make LapLink V a Windows application?" What is the point of Transferring Software re-inventing the wheel when DOS?

To start with, there is a LapLink for Windows (see below) and it is optimized for use in that environment. To understand the software's approach to the DOS product, you need to think a bit about how LapLink is used. Quite often, it is run on laptop, notebook and even palmtop systems. Not all of these systems — particularly the palmtops — can run Windows very well.

For the reason, LapLink V is designed so that it can be run from even the most modest handheld system; you will take

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WinLink

From Rapp Technology Corporation
Ph: (416) 888-0554



While Rapp has been producing file transfer products since 1984, the spin-off of this Windows-based offering has simply occurred: the company's product *WinLink* is an ultra-easy-to-use

product as it seeks to bring the so-called Windows applications "drag and drop" metaphor into the file transfer arena, allowing you to transfer groups of files between PCs and remote servers merely by dragging them and dropping them.

In many ways, *WinLink* is similar to *LightLink* for Windows. However, the metaphor for remote control is quite different and the scope of the application is somewhat more limited. To start with,

WinLink comes with both DOS and Windows modules in a single disk allowing you to install a copy of the DOS software on a very old PC, then Windows machines you may be using as well as the Windows implementation.

WinLink does, however, claim to be faster than *LightLink* V — another test with the product would seem to bear that out. While to look *LightLink* V it took 26 minutes to transfer a 10-MB directory from a serial cable from one PC to another, *WinLink* was able to accomplish the same task in a mere 17 minutes.

It should be added, however, that the connectivity was broken a couple of times during the transfer and had to be re-established. There was no clear indication of why this happened and it may mean that you would need to think twice about using this part of *WinLink* for doing what needed transfers of files between desktop PCs and notebook systems.

This may be the only use of the built-in *Filebook* PCs are intended for: finding computers during large multiple file transfers, after because the

power management software decides that nothing is happening because the keyboard is not being used and therefore decides to shut down the serial port. In the hard disk, the floppy disk or awaiting file is checked will continue power. If it is doesn't shut them down completely, but puts them into a "sleep" state and they are called upon to do some work, that can produce enough of a delay for a constant release package to "time out" because it has waited too long before receiving a signal back from the device it just a command to.

A package more interesting aspect of *WinLink* is the *HotPort* software which comes with *WinLink*. This allows you to establish a small, local network between two computers that permits you to use the device as your desktop computer, for example. From your notebook, *HotPort* gives you the facility to "map" printers, hard drives and CD-ROMs from one computer to another.

If managing the CD-ROM as a desktop machine in a network as drive D, for example, we were able to install the results of a large multi-media application and run it all the laptop were equipped

with a local CD-ROM drive. Given the fact that communication took place over a relatively slow serial connection, performance was slow. However, even complex jobs such as running QuattroPro seemed more handled without crashing the machine.

WinLink was an impressive file transfer package — and even more impressive as a serial network — and is worthy of consideration for anyone needing to share data and address devices between PCs.

Linkage PowerLink

Price: \$499.75 Ph: (416) 888-0552

PowerLink is a much simpler Windows application than any of the others featured here. It is designed primarily to allow two computers to hold the same data and allows you the facilities to copy that data to a "read/write" synchronization.

This simply allows you to synchronize the files on a disk, in a directory or even on the whole of a hard disk. At \$499.75 (\$52) it is not an expensive utility, but is quite limited in its scope. It operates over cable connections, network access over links via dialing stations and between floppy disks. It

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The Story

There is a truly sad tale that every good writer must be a great salesman in order to write, the story of The Maximizer Sales Suite for Windows had little effect on my own ability to maintain a steady career. That's because the tale is a sophisticated system management and new-business package for handling hundreds — or even thousands — of clients and there just aren't that many salespeople any more... yet.

All the detail was laid out before I knew it. I was in Doris Hamilton — a sales representative who was having trouble keeping track of all her clients. The experts and database equipment to a wide range of business. He is also a retired member of the world of computers so I knew I had the ideal test bed for this comprehensive package.

The Pitch

Coming from the fully integrated software bundles, the basic interface "business" efficiency in communicating with, and keeping track of the people with whom you do business.

Of course, the premier component of the suite is *The Maximizer*, the highly efficient contact manager that allows you to find (or a right off the bat) "new every



detail about your customers and prospects including a running list of every meeting, letter, fax and phone call" as a database of business contacts. The *Maximizer* software does this by adding a wide variety of ways to store, organize and view information as well as allowing replies notes to be added to each record.

As a result, *Maximizer* established a framework adding various sales people features of the extensive business and marketing in hand to their sales strategies. And having said that around \$250 before the sale was available, things are looking even better now.

The five packaged programs in *Capital Reports from Capital Computer Services Inc.* is a report generator that allows you to quickly adjust your business records into various presentation-quality documents.

Maxima, produced by MagLine Corp. is a utility utility that links your database to maps. Periodically through the suite is a Canadian product. I don't see to Canadian

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BY JEFF EVANS

Personal Pocket Jet

This is the smallest printer we've ever seen. When we went to take it out of the box, we couldn't find it at first, because it seemed smaller than the power supply cable in included box of paper.

We thought the included cable and the printer inside was a cleaning kit or something. The owner insisted that we discovered the printer. It is tiny, weighing only 17.5 grams, even after the 900mAh battery is installed (about 15 grams without).

The printer doesn't come with any Windows software. It includes HP PCL 4, so you just select the appropriate Windows driver and print. For printing from MS-DOS, there is a DOS printing disk. There are some simple indicator lights on the printer surface to let you know how it's doing, and some dip switches that allow you a degree of control over the printer's configuration.

The manual, with illustrated manual explanation on printing, including how to program the 16-bit dip switches using a pen or pencil. It has a special, tiny, parallel-print port and a parallel cable. The Parallel ports black and white only.

It is quite fast — about 30 pages per minute for text. It printed 34 pages with a single battery charge before going up, and the quality was a reasonable approximation of a 300-dpi laser. We had to be a bit careful feeding paper, since there is a bit of paper feeding paper, since there is a bit of paper feeding paper, since there is a bit of paper feeding paper.

The printer will only work with its own

thermal paper. It makes images on a sheet of paper, so the paper remains blank. Hence the box of thermal paper is included. This means you don't have to worry about printing out of ink, paper or ribbon, but you do have to worry about running out of the single paper. In some areas, you are advised to order single paper before printing out on the road.

The printer is so small that it is a little hard to hold. It is a good idea to hold it with both hands, and to hold it in the center of the box. It is a good idea to hold it in the center of the box. It is a good idea to hold it in the center of the box.

The printer has a one-year "lifetime" warranty. However, the printer comes with a one-year warranty of a replacement printer. A two-year extension of this policy is available for \$150 (US).

Contact: Pocket Technology, 800-545-5144

Newton PocketBook Division 300 And BookWriter 300

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New Media Corporation Handles The Work
Into PCMCIA Combo Card

BY BOSS MACDONALD

Product: Multimedia Combination
Module and SCSI PCMCIA and
FireWire Card
Price: \$995, \$895

Big changes are occurring in the PCMCIA market. The past 12 months have seen phenomenal growth in both the availability and popularity of these little credit card sized accessories. To match so, in fact, even desktop users are upgrading their adapters as they find out just how on the simplicity and flexibility that these "limited" vs. add-on offer.

But there's always been one thing that PCMCIA that serious computer users have had difficulty overcoming: the fact that most multimedia — and more driving adapters — make only one or two slots available. If, then, you have a PCMCIA lockdown SCSI adapter, sound card and LAN adapter, you have to think hard before upgrading areas about which care you're most likely to need for the time at hand. You install these cards and simply hope, say, that nobody's going to try and fit you.

But the industry has been quick to recognize this problem and has just then ingenious minds to solving it with the result that it's already not uncommon to find "modular" cards that blend the functions of two different popular PCMCIA cards into one that fitting one of those all important slots.

But when some manufacturers have gone with somewhat obvious combinations — Ethernet adapters and audio cards, for example — New Media Corp., a leader in PCMCIA development, has come up with the perfect and most useful card for multimedia notebooks: the use of a card that contains a SCSI II interface adapter with a 15-pin sound card.

Anyone familiar with New Media Corp.'s products will already know of their expertise. SCSI II card and Windows-based cards (though relatively new, both Type II cards were among the first on the market making it a portable multimedia a reality).

Now, with this latest new Multimedia Combo Card produced as Cardbus is becoming, they're focused at the issue of both excellent products into a single PCMCIA package.

For the uninitiated, the theToscan SCSI II circuitry produces best data rates of 10 megabytes per second and comes bundled with CD-ROM212 software to provide compatibility across virtually all SCSI peripherals. In terms SCSI devices can be really interconnected or fully channel.

The 15-pin FireWire 28 pin 15-

pin connector is a step in the data stream.

The only disappointing aspect to the Windows — and one that New Media has certainly dealt with on the Combo Card — is that it's limited with the highly limited Microsoft Windows Sound System software that this device is not just limited alternate packages.

The theToscan and Windows shipped separately with a suggested price of \$1299 each. The theToscan Combo Card is shipping with a list price of \$995, which would not be a small \$400, given current Canadian exchange rates.

I already started out to be the fastest product in the line to be able to use my NEC Versa II 900MHz notebook for my CD-ROMing. But when I later acquired a theToscan Card I was a bit frustrated as not being able to play with my CD-ROM and not to be able to use it at the same time. I really enjoyed one of the best multi-media CD-ROMs off the line, however, I really enjoyed one of my best friends.

The Combo card is meant to be your computer for most of a person's desktop. SCSI II or PCMCIA cards with a bridge in the center housing the speaker, microphone and the 15-pin. I was surprised but modestly pleased to see that New Media has added a "15 pin" jack to make it easier to play and receive regular audio disks. A connector connector (not SCSI II) is available for those with CD-ROM drives that require it.

Also in the box are a microphone, headphones, a 15-pin cable and a 15-pin cable. Microsoft Windows Sound System will be the best software and a good idea that the New Media Knowledge Bank will find that especially help you with installation and configuration problems. Of course, there's a user manual too, which is a bit of the most comprehensive and easy to understand I've seen.

I am now happy CD-ROMing and even more happily looking and installing on the same time. I'd, which is might not be the case but I want to do what I did and explain why SCSI and sound cards are already bought, the New Media Multimedia Combo Card will undoubtedly be doing up 100% — and waiting — for a lot of time before.

This seems sure to be a bit.

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Top 10 moments the festival staff think computer is missing. Like the time of day of your link, where you are connecting from, the duration of your stay, what things you looked at, all kinds of stuff. — Jeff Gorton

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events about being electronically recruited by their "cowboy" contacts." There is a heavy feeling that this time as you look through Fored's hyper-escape of real digital life-Captain to immediately show manifesting crime you feel compelled to click your way to information enlightenment. It's a bit like being in the clutches of a superb salesman or kind and cheerful. You know he's doing a number on you, but with previous lawless from now can't you let this slide?

But this was not my first visit to Wired's World Wide Web site. The second time, I realize, I remember my password, so I had to send an e-mail message to help@wired.com. My answer came back from the "The Wired Line" email list. From: chag@wired.com; with a note pasted into the upper case information: WORLD@WORLD

More (hardly) paid my demographic dues and been sufficiently inspired by those virtual conversations. I obediently type as my flesh/ed membership and personal life is good little ordered. I want take my frustration at their need to fill out and log my activities.

Though I know it's easy to do with computers, I consider the Internet supposed to be like it is today: intuitive and technology as non-existent as open and imagination. The idea of supplying a password to read a pay cabinet magazine seems so odd. It's not as though Pd. buying into some secret magazine database. Or say I just become one of you?



The final homepage came up on the computer screen, and I was both surprised to

see a special ad for Screen Graphics. Again I decided to click on the accompanying blue text and there I was again back at the virtual, local world.

Chomsky's take TSI not exploring the graphic interface of the World Wide Web by sprinkling their corporate logos all over the place (see Andrew's post on that failure in Boston). It also leaves out a School of Computing Science, says "Machetta Pasterius" if the natural world are prime targets for corporations building brand awareness in the cultural vacuum of cyberspace. In the absence of anything physical there is nothing there, says, Mollusca, April 2.



In a way, the Net is the ultimate marketer's dream: With the total elimination of the physical you only need to sell once, just like large and mighty but the large.

In fact, our fund members are finding it surprisingly difficult to sell things on the Internet. In HotWord classified ad service, once registered as an ad for a book called *Living With AIDS* I was attacked by the editor. W. Paul Baker's glitch of selling the book first to the first 10 respondents. At the time, "Proud" was listing 20,000 books who had passed through them. And Word girls (now it's reading, 140,000). Once Baker's ad had gone up for about one day, I left him the 10 best books would be gone but surprisingly, I was only number nine.

Malay says "I would have reported my friends given the size of the mail and the Foreign Minister. However the passport agency is working hard to find a mail in return they are waiting that I contacted 20 people I know."

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Reboot Combines Dazzling Effects, Engaging Tales

BY KEITH SCHENGLI-ROBERTS

I came from the Net. From systems, peoples and cities to this place: Mainframe. My format: Guardian, to record and to defend my newfound friends, their hopes and dreams, from their enemies.

—Bob's opening lines from Reboot

Remember Teles, the Disney movie made back in 1943, which boasted "one of the best computer animations" in history (all thanks to a computer who got rather into his computer in the course of the movie, by name and naturally with other characters inside the computer). He spends his whole time trying to escape from the confines of the computer. The special effects were great, but the story itself and the character were made many people want to escape from the confines of the movie theatre before the show was over. The problem with many "digital" stories is that, while the effects are great, the characters and plot typically are not.

Jason Reboot, the first widely computer-generated television show. The theme is all effects, and while it shows the idea of beings living inside your computer, the characters, rather than the breath-taking visuals, are what keep you interested. However, you can also expect to be blown away by the quality of the computer graphics.

Bob is the main character, a Guardian who has traveled across the Net to enter down in Mainframe. His primary role is to fix and repair the bugs that appear in the reality of this digital world and protect it



against enemies such as computer viruses. His partner, Tim, is a computer spirit, a communicable virus/spirit who can't eat and runs on a "Blower" (Bob's "little brother form") in essence, a real computer who wants to become as successful as his big sister, but also wants to be able to do the "fun stuff" that Bob does. There are several other minor characters, including Tim's house-maid dog Fido, a robot dog program called Bing, and Cool the ferret, the tip calculating machine of Bob's Diner. They possibly include Mainframe with the other main inhabitants, the "linode" — characters who take the shape of the numbers zero and one — and who do most of the real work in Mainframe.

Visions and Visions

But all is not well in Mainframe. Reboot seems baffled with its sort of reality between an evil, Chief amongst them is Megabyte, the smooth-talking, charismatic computer virus who inhabits a cube shaped building at the top end of town. His deep English accent and natural politeness barely conceal his vicious nature. His goal is to increase his powers by taking the Super

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Disney's Aladdin Comes to the Desktop

BY PEDRO ARRASIS

Title: Aladdin's Activity Center
Price: \$29.95 (includes tax)
Area: CDR in (children's) field
Recommended Age: 5 and up
System Req.: minimal. Works on better Windows 3.1 or 4.0 IBM PC/XT/AT 100MB or 1.44 MB diskette or tape drive

There is nothing like familiarity to make children feel comfortable in their day to day activities. When there is more recognizable than Disney the name synonymous with quality children's stories and movies for the last few decades, Disney has entered a whole new world with its release of Aladdin's Activity Center as an interactive program on CD ROM.

In Aladdin's Activity Center, you are transported to a world where you can learn where and what to do. The interface is well suited for younger users as there is no typing required. Its comprehensive, illustrated activities, all the pictures are familiar to those who have watched the movie on the video.

The Game welcomes all travelers to this exotic desert and offers five centers to guide you along your way. An explorer's purpose of each trip and explores how to work his way out if you are having difficulties. Game includes such as Jodan's Villains, and his friends to introduce throughout the program.

Features

In the Arabian Nights, you can browse the magic shops at Agrabah. The Game or Windows presents a series of the famous activities related to the Disney movie, while the Disney's Theatre presents clips of the movie. In each location (except the desert) you can choose from its activities. Memory Game (played with cards), Amazing Memory Spelling



Challenges, Pattern Puzzles, Music Memory (with Aladdin's memory) and Matching Mats. Each has three difficulty levels, which can be chosen by the child as they build confidence in their skills. As the program still runs, a chat system is available which offers helpful hints until the activity is successfully completed.

If your child isn't painting, the Art Center lets them choose four projects:

- **Colors Colors** with 14 different colors (five different brightness and saturation levels) which paints the current colors with each stroke.
- **Watercolor Paint** where you apply one color over the last with different (and sometimes unusual) results.
- A **Paint Party** by Newton with three different levels and
- **Connect the Dots** with a choice of connecting 30-40 dots (an easy way to practice counting).

After you view the marketplace you can pick it all up.

The audio and pictures are excellent and the beloved film follow the Game really makes this program come alive. Using from activity to activity is a breeze and fun, with the six film clips presenting the main songs on the movie soundtrack. Aladdin is a delight to play with excellent reactions to draw throughout. You and your child will have hours of enjoyable exploring of this exciting new world.

Contact: Disney 1-800-451-1010

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book review

Internet Advertising Explained

[illegible]

Title	Interleukin-6 Mediates the Inflammatory Response to Intracerebral Stroke
Author	Michael Srinivasan
Editor	Srinivasan Prasad
Page	2281-2282
Publication (JGIM)	2004

which is appropriate because that is where most people agree something will take root on the Internet. There are plenty of strong, state-of-the-art computers and government-run Web Home Pages, along with considerable free software to allow a community to develop a Web site.

With several million people estimated as having inherited acres (and the money to sell) generated in only a matter of two brief corporate outbursts, it is inevitable that the possibility of the full White House and plenty of "you me" looking for ways to navigate your way through the maze will be a real thing, both on how business and on how to take advantage. But one aspect to the plenty of them is the one few mention that the government on the internal market by the House of "Business and Finance" is not the only one to make a profit. It will also be the one to make a profit.

Internet can be used in all business. There are suggestions and how to use Internet under these heading identify and national's mailing services to your advantage. There are also links of Internet service providers Internet content software and other information that will help you on this to a great

With the five basic strokes (front, back, swirl, joint, and a lefty taught around the edges), it is a good five minutes looking over the literature to see what and how many educators and staff for their schools use. The book assumes a passing knowledge of some learned books; it begins by explaining the background that has developed and presents in much the history of "Western knowledge."

City potential drawbacks, his readers (who are just new to the Internet) do not have his superior Internet acumen so that to get the most out of the book, you will have to learn as much information that is only accessible to him. In the last situation, you should have access to Internet e-mail and a home/office Word 97/98. We hope to get the most out of the book. Updates to the book will be provided through an Internet-based FAQ (Frequently Asked Questions) list; get updates by e-mail.

Another scholar, Singapore's Lim Joo Ewe, says several implications for the Internet Day at Harvard. He says that advertising on the Internet is "free" as far as prices go. It is not free — putting together a good targeted program often requires a substantial investment in time, capital and people.

franchises also tend to have a more consistent with the potential package than independent technologies like the Internet, which depend on corporate culture and on Windows's availability in general. Right now, the Internet is a very low-risk playing field for any corporation who would like to make its way into the Internet. Most of the Internet's early business successes have used, as a foundational business in a global marketplace, "SAFARI" is a small program compared to the potential long-term impact of the Internet. The message is clear to any corporation: get on the Internet, make money, and you will be rich. In fact, the Internet and Web...

By also arguing against another view that the greatest harm either would be to farmers, marketers who have said that the Internet is only a tool, the response presciently argues that the Internet has its own rules of conduct, and that would be marketers who proceed with their plans. It also is more likely to fear the wrath of the Internet audience than to make any sales from it. Its conclusion by saying that "the Internet is not a road but an end, and one with a close horizon."

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slippery. That percentage increase of nearly \$200 million, or 52.1 percent, over the third quarter of 1994.

The fastest category was Home Automation which grew 44.3 percent. But the dollar figure for that category — \$66.6 million — is still much smaller than the \$254.2 million, and \$107.7 million reeling through the cash registers for word processors and spreadsheet software, respectively.

Sales of database software rose 33 percent for the third quarter of 1994, and at \$72.2 million, represented the fourth highest sales category. The figure was helped by the 135 percent jump in sales of Windows database programs (and offset by decreases of 93 percent for DOS database programs and 4.7 percent for Mac sales).

Sales of DOS-based programs declined in every category except Games and Home Automation. This says the sales director has been so busy that at the third quarter DOS-based spreadsheet products outsold DOS-based word processors. Database software led, priced at 14.5 million, such, etc. continued... [E]

TOTAL SALES (Third Three Quarters of 1994)

	1994 SALES	GROWTH
DOS	\$102 million	41.8%
Windows	\$114 million	40.1%
Mac	\$122 million	37.5%
Other	\$11 million	26.0%

Top Five Categories (including other products in million U.S.)

DOS	
Entertainment	\$208.2
Finance	\$133.5
Home Automation	\$66.6
Word Processors	\$107.7
Utilities	\$71.9

Windows	
Word Processors	\$141.1
Spreadsheets	\$140.0
Databases	\$115.1
Productivity Graphs	\$104.4
Project Management	\$100.5

Macintosh	
Drawing and Printing	\$114.7
Word processors	\$103.1
Spreadsheets	\$80.0
Home Automation	\$54.2
Other Graphics	\$49.2

TAKE A WALK ON THE VIRTUAL SIDE — Virtual Walkthrough 3.0 for the Windows, Macintosh and Power Macintosh are not only hot items you'll want to make one of these packages, you will also see what fun computing is all about. This software allows you to design a structure and then walk through it to get a spatial and realistic sense of your creation.

The product had its beginnings at the Montreal '88 computer software game, The Colosseum, which Macworld Magazine named "Colosseum" game of the year in 1988. From there, the game evolved into a special application that helped create sets for the movie "The Abyss." It then evolved into the first version of Virtual Walkthrough.

The current version 3.0 being used by Hollywood studios such as John Badham, Sydney Pollack and Tom Cruise. These directors use Virtual Walkthrough to design their sets, and the product has grown that in one year millions of dollars by allowing directors to pre-visualize the overall vision and the lighting.

One architect designed an airport exit area and was able to view the project whether he was walking through it, driving by it or flying into the airport on a jetliner.

These other potential tools are available to anyone providing you have the hardware to run the program (and the \$149.95 to buy it). I found that even with 1 MB of RAM the Windows version of the program was down right sluggish. You should also factor in more than just a few days to become proficient using the special tool menus needed to create your new space. Once you do, and what you can then create and explore the space you designed, you may find this tool on the face of your next stand-up. Not only can you walk through your product, you can also look from above or underneath.

Virtual Walkthrough potentials the types of programs that we will be seeing in the future that combine more and more realistic renderings through 3D technology that is getting ready to use.

Virtual does make a further product called Virtual VR, it has a suggested retail price of \$399.95 — later.

Contact: Vista Corporation, 814-487-1700

PUT A MAN IN BUSINESS VIA THE INTERNET — These days more and more firms are placing their ads advertising their wares on the World Wide Web (WWW). So far, there's not much out there in the way of variety, and the majority of



companies. With files that are not too big, either on a computer or on a network, you can put up all this data on the Internet, and you can

But files are already changing. The Web is becoming like a computer to find information about things you didn't even know existed. As evidence of this, one company has put up a Home Page detailing a travel package that includes flying to London, Hawaii and, yes, back. The Web 3.0 has, after a holiday for the thrill-seekers interested in flying a real July 24 Falcon II supersonic fighter at twice the speed of sound above the clouds of Mexico.

Once you pass the required physical examination, you are then out to the ride. You fly with a number of the elite hunters The Hawk Association, who will get you up in the air. Once there, depending on your level of control, you can have full control of the plane under the careful guidance of

Continued on page 110

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What to Do When That Spiffy New Software Bags Your Not-so-new Computer Down

BY JIM CAUGHMAN

Again to try out your new program upgrade, you plug it in your computer and install it without a problem. The new features make your life easier, but after working with it for a couple of days, something seems wrong. Not only is the new version slower than the old one, it seems to slow up everything else on the computer as well. You don't afford to buy the latest computer available. What do you do?

A standard desktop computer of two years ago will run a 386 with 4 MB of memory. It can still when it was running Windows and the applications of that time. Now, a "386-class" computer is a fast ship with lots of memory, and programs are written for a computer that far. These computer makers have predicted that by mid year, 80 percent of the computers they will sell will be "386-class" — all in comparison to the software market is accelerating software manufacturers to create better — and to make it bigger — applications that prompt to do more than the previous version on the computer's software. But today's big new applications also seem to require the computer.

Buying a new computer is the obvious solution. But this may not be for you because of corporate purchasing policies, lack of money, or a space with an aesthetic attitude such as "It is slow what you want it to, why would you get another?"

How can we make the computer we have run faster? There are several things you can do to speed up your computer, and Windows in particular. They may involve minor hardware changes, or changing the settings for Windows or DOS. Make us different.

More Memory, More Storage

Windows uses memory to hold the applications you want to run, changing from one application to another as necessary when it runs out of room. In memory, it creates "virtual memory," using an area on a hard disk to hold work space which is not needed immediately. If you don't see something in memory for a while, Windows moves it to the hard disk where it waits until you make room for what you are working on right now.

When you or your application returns to the information which was moved to disk, Windows must look back after waiting something else and then disk are much slower than memory, so this swapping back and forth may cause a noticeable delay, or simply slow things down. Anything you can do to reduce the swapping or to speed it up will make your computer run faster.

If you can only change one thing, buy memory. More memory will make a big difference in performance. While Windows was designed to run with 1 MB of memory it is difficult to run it and to applications. Windows will work with 4 MB but it's much more comfortable with 8 MB or more.

A new hard drive may also help because as that the 80-000 ball drive you bought with the computer is usually still around. Newer drives are faster and cheap, and the swapping is apparently faster. You need not deal with compression with DoubleSpace or DiskStor, both of which slow disk access.

There are also many things you can do to speed the machine up without changing

the machine itself.

Turn Your System On the Most Often

For The Week You Use Most Often. Some suggestions for tuning may make your computer work faster, or they slow things down. This depends on what you work with.

For example, if your work involves a lot of input and output, work on processing with a data base program, you want to make the disk work as fast as possible even though that may slow your word processing a little.

You may want to turn some operations you do often, in order to have an objective comparison. If it's important to produce the mailing labels quickly, check how long it takes. Then make system changes and try it again.

TRAINING: Before you make any changes to your system file make a copy of the file so that you can revert back to it in case your changes don't have the expected effects. Also make a backup of your drive, or that you will be able to start your computer again from the floppy disk. If you find the changes you've made from a system file better up the computer or prevent it from running, you can recover by booting from a floppy disk and use the DOS COMPT command to copy the original file back.

Tuning DOS

Optimize your network manager. Memory utilities such as DOS - MemMaker have Optimizer, which will adjust memory requirements, based on the programs you have at startup through CONTROL and AUTOEXEC.BAT. They will load as much as possible in high memory to give you more usable memory before DOS.

Use disk defragmenting software. Defragment is almost major. It works faster what you will

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Continued from page 107

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- 4 32 Bit PCI Local Bus IDE Drive Controller
- 4 17" Flat Screen 1280x1024 1 Monitor
- 4 1000x1200 4.0 3840
- 4 Medium Tower with 4 Drive Bays
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- 4 64MB RAM, Expandable to 128MB
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- 4 32 Bit PCI Local Bus Video Adapter with 1 MB (Up to 128K)
- 4 32 Bit PCI Local Bus IDE Drive Controller
- 4 17" Flat Screen 1280x1024 1 Monitor
- 4 1000x1200 4.0 3840
- 4 Medium Tower with 4 Drive Bays
- 4 2 Serial / Parallel & 1 Game Port
- 4 Keyboard: 101 Enhanced Keyboard
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ATI Mach-64 Video

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- 4 Processor: 1 486DX2-66
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- 4 32 Bit PCI Local Bus Video Adapter with 1 MB (Up to 128K)
- 4 32 Bit PCI Local Bus IDE Drive Controller
- 4 14" SVGA Non-Interlaced Monitor
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486DX2-66 System
Intel 66MHz 486DX2-66
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- 100 Pages of Paper
- 100 Pages of Paper
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Brother HL-100
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